

NEW KNOX MOTOR HAS ENORMOUS POWER

Latest Type Engine Serves Either for Aeroplane or for Motorboat.

In time of need American brains always come to the front; and the fact cannot be better illustrated than by the latest cardinal motor in the world, which has just been announced as the work of Frank H. Trego, chief engineer of the Knox Motor Company at Springfield, Mass. Many times in recent years has the attempt been made to build a successful engine of more than 200-horsepower for the air service; until now all efforts seem to have resulted in more or less failure, and it has remained for an American concern to produce the engine in the face of all the difficulties.

Excels All Foreign Makes.
The Government is to be congratulated on having within its borders a larger and better engine than has yet been built abroad, and especially on having the men who can produce promptly the needed things in scientific work as the art progresses. We learn how to build ships which no gun can harm, and then we build runs which will make scrap iron out of those same ships. This turn-and-turn-about goes on forever, and we have now reached the state of air flight to be able to handle large aeroplanes, but no motor has been produced large enough for them until this new work of Trego was announced.

This seems today a very large motor, but we predict for the future plants of the air which will make the present aeroplanes seem small, and which will require motors of perhaps 1,000 horsepower, at least by 1925, the growth of this art is so rapid.

Has Enormous Power.
It is difficult for the average person to realize what this enormous power means, even when we are told that the four-bladed propeller is fourteen feet in diameter, and that it is to turn at 1,100 to 1,200 revolutions per minute. At that speed the effort of the blades to fly out of the hub is about twenty tons each, and the propeller has a pushing power of 2,000 pounds.

The motor is perfectly adapted to use in high-speed motor boats, as this was looked out for in the design, and with the light weight and high horsepower, should make a sensation in that field. Already motor boat enthusiasts are negotiating with the company in an effort to obtain some of these motors for the racing season next summer. Seventy-five miles per hour has been predicted by motor boat designers with this equipment.

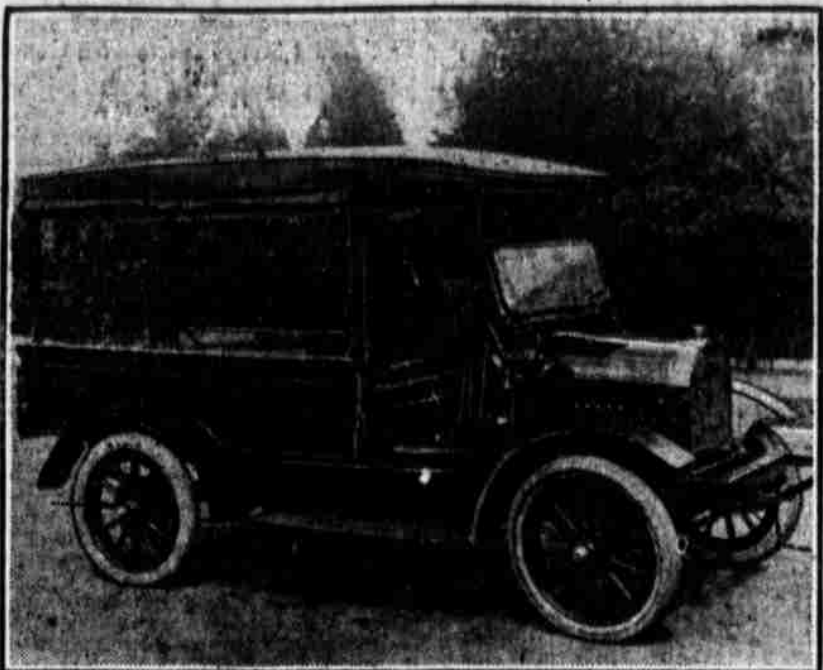
The motor, which weighs complete, including electric starting, electric lighting, tachometer showing propeller speed, exhaust pipes, ignition apparatus, and provision for driving wireless telegraph apparatus, 1,400 pounds.

It was run for a period of eight hours, in which its rated 200 horsepower was exhibited during the last hour. The test was carried out on the company's Sprague electric dynamometer of 500 horsepower capacity, probably the largest equipment in the world.

Marine Band Orchestra Not to Play on Monday

Because of repairs being made to the concert hall at the barracks, the scheduled concert by the Marine Band Orchestra for Monday at the Marine Barracks will be omitted.

SPEEDY VIM TRUCK



A Rapid Light Delivery Vehicle Which Has Come Into Wide Use Among District Merchants.

FIRESTONE CO. VOTES EXCESSIVE SPEED MILLION TO WORKERS BAD TO TRUCK TIRES

This Sum Is Given to Employees' Welfare and Insurance Fund by Tire Firm.

Adding still another link to the welfare chain that binds its employees closer together, stockholders of the Firestone Company at their annual meeting voted to give one million dollars for an employees' welfare and insurance fund. The call of the meeting, dated August 31, proposed the increase of the capital stock to \$60,000,000 and a stock dividend of 200 or 300 per cent be declared. Instead of these proposals the stockholders voted: 1. To set aside \$1,000,000 for an employees' welfare fund.

BattleShip Contracts To Be Let Next Week
Contracts for four United States battleShip plans will be awarded, according to press reports, to the New York Shipbuilding Company and the Newport News Shipbuilding Company next week, while contracts for sixteen destroyers will be placed with the Fore River Shipbuilding Company, Union Iron Works, and William Cramp & Sons.

Increases Amount of Shock and Greatly Magnifies Ordinary Defects.
Running truck tires at excessive speeds is a common fault among truck drivers, says Branch Manager Gimmet, of the Goodrich Tire Company. "The effect is the same," says Gimmet, "as running them over rough roads, for speeding magnifies every irregularity. The tires will absorb the shocks when the truck is operated at the recommended rate of speed, but increasing the speed greatly increases the force of the shocks. For instance: doubling the speed makes the force of these shocks four times as great."

In the first place there is the danger that the centrifugal force in a swift moving tire will tear soft rubber from its base, and generate a heat that will cause the rubber to deteriorate. No matter how great the cushioning qualities of the rubber, the tire does not have time to accommodate itself to the rough surface of the road, and the destructive jolting caused will be very costly. An expensive truck can soon be jarred out of commission by speeding. "It is surprising how the mileage of a truck tire can be increased through a little care, and inevitable that it must deteriorate rapidly if abused through excessive speeding."

Motorist Sentenced For Driving Too Slow

WORCESTER, Mass., Nov. 15.—While thousands of motorists have been arrested and fined for fast driving in Massachusetts, the first case where a motorist was brought into court for slow driving occurred here recently. Edward C. Smith, of Leominster, was before Judge Wiley on a charge of driving so slowly that he obstructed traffic.

Answers Found Here To Motorists' Queries

By W. H. STEWART, Jr.

Motoring Department, The Times: Finding that my front wheel wobbled recently, but was unable to fix it. One of the balls is missing, but I don't know how to get one in or the others out. It is not like the one I had on a bicycle, as the balls do not all fall out when the bearing is removed. This consists of two heavy rings with the balls between. Please let me know if this is serious, and what I should do.

You will find a groove in the side of each ring. By bringing these together, one ball at a time can be forced out on an arbor press or driven out with a hammer. Remove one and measure it carefully to at least one-thousandth of an inch. The new one must be of the same size or slightly smaller, otherwise it will take all the load and may crack. If bearings and balls are badly worn, they should be replaced by new ones.

Motoring Department, The Times: Is it not dangerous to smoke in an automobile? We find "No Smoking" signs in all the garages and occasionally read in the newspapers that it is safe to smoke, and in what circumstances is it not safe?

Gasoline vapor is very heavy and sinks to the ground, so it is not dangerous to smoke or even strike a match in the car. The real danger comes from some careless person throwing a lighted match under the car. If the carburetor has just been primed or there is a leak in the tank or fuel line, then the trouble begins.

Motoring Department, The Times: I have a 1915 model Reo car and am at a loss to understand why there is not more power developed in any position, unless it is because the oiling system is plugged up or out of order. The pumps is working O. K., as oil flows when plug is taken out, but I know of no way to test the cylinders, that is, to see if they are getting sufficient oil. Engine seems to labor very hard and drags at all times, which causes me to think this is where the trouble lies. Can you advise me through your column how I might go about it to perhaps clean out this trouble, or advise what indications might be noticed to tell if the oiling system is working properly?

Crank engine by hand to tell if cylinders and bearings are getting oil enough. If there is a distinct drag they are not getting oil enough. This is especially noticeable where the compression is good, as the crank handle should spring back freely. If pistons move freely when tested as above see if carburetor is properly adjusted. If engine responds readily to throttle while idling, but drags when gears are in mesh, look for dragging brakes or bearings out of line.

Motoring Department, The Times: My Ford engine misfires when running. The wiring seems to be in good condition, and there is plenty of spark at the magnetos posts but not enough at the spark plugs. Can you suggest a way to remedy the trouble?

The trouble is probably in vibrator. Make a gap of not more than one-quarter inch between wire and spark plug on No. 1 cylinder. Crank at No. 1 plug and adjust vibrator until spark is hottest. Do the same with remaining vibrators. If you do not use a battery, engine must be running. If it is impossible to get a good spark, touch up vibrator points with a strip of fine emery cloth. If this does not give a good spark from some one coil the

condenser or secondary winding is damaged and coil must be replaced.

Motoring Department, The Times: For some time I have been an interested reader of the remarks in the automobile department of your paper. Being a prospective motor car buyer, I would appreciate any information that you could give me through your columns in regard to "valve-in-head" motors compared with "L" head motors. Will an "L" head motor develop as much power as a "valve-in-head" motor of equal size? With the same kind of a cooling system, will a "valve-in-head" motor overheat any sooner than an "L" head?

The power developed in an automobile engine does not depend on the shape of the head. In both cases the designers have worked out the best shape of valves and cams to operate them. The design of the cooling system has been settled with equal care. If any difference in power or heating can be found between two such motors it is because of difference of design, and not because of the relative merits of one type or the other.

Motoring Department, The Times: Will you kindly tell me whether it is a good idea to keep kerosene instead of alcohol in the radiator of my Buick Six during cold weather?

There are several reasons why kerosene would not work well in the radiator. It will not mix with water, it will rot the rubber hose at top and bottom of radiator, and the odor would be very objectionable. Use alcohol in the proportion of one gallon of alcohol to three of water, adding more alcohol from time to time during the winter, and there will be no danger of freezing.

Motoring Department, The Times: What is the trouble with a motor that misses on one or more cylinders when throttled down or when pulling a hill? It is not always the same cylinder that misses. It has been given a thorough overhauling by an experienced man, but he failed to find the trouble. The motor is a four-cylinder of the separate cast type. I would be pleased to have your opinion as soon as possible, and thank you in advance for any information you may be able to give.

Test carburetor for water and see if adjustments are right. Look for leak in inlet manifold. Then examine ignition system thoroughly, as a loose connection would readily cause the trouble you mention.

Motoring Department, The Times: I wish you would kindly advise me when storing a car (auto) if it is necessary to drain the oil out of engine, as well as to drain the radiator. Also what would you advise doing about the tires? Remove the tires, or just let the air out of them and jack up the wheels to take the strain off of them? And information regarding storing of the car for the winter will be greatly appreciated.

See answers to A. F. and H. W. in previous issue. Oil should be left in engine. Jack up car and remove tubes, but paint rims with rim paint or graphite and shellac, and then re-

place shoes. Cover car with a covering of sheeting or other cheap material.

Motoring Department, The Times: I have a 1915 Detroit and there is a continual grind or hum in the differential. Have adjusted pinion gear, but it does not seem to do any good. Could this hum be in the transmission? I hope to see your answer in next issue.

The hum may be in either place or

both. Try using a heavier grease in the differential. If this does not stop it put heavy grease in the gear case. If still troublesome get some fine boxwood sawdust and put a handful in differential case or a double handful in gear case. The sawdust absorbs the grease, so that it assists in lubrication and cushions the gear teeth as they stroke.

National Electrical Supply Company

Cold Weather Ignition Troubles End When You Use the Non-Sulphating

EVEREADY STORAGE BATTERIES

Automobile Satisfaction now depends absolutely upon the Storage Battery. Starting—lighting—ignition tell the whole story. No one can afford to take any chances, and no one has to, for EVEREADY Non-Sulphating Storage Batteries give the kind of service that insures perfect satisfaction. Let's equip your car with an EVEREADY.

AUTO ROBES

A big variety in both staple patterns and novelties. We're featuring some strikingly beautiful Indian designs you'll do well to see. Glad to show them.

Very Reasonably Priced from \$6 to \$12.50

Correct Winter Gloves for Motorists

Fine fitting, fleece lined, and the practical sort that keep the hands comfortably warm without the unnecessary bulk that interferes with free use of your hands when at the wheel. Many styles to select from and at

Unusually Moderate Prices \$1.50 up to \$7.50

Automobile Supply Department

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1328 N. Y. Ave. N. W. Phone Main 6800

"When in Doubt, Push Both Feet"

THAT'S ALL YOU NEED TO KNOW to drive Reo the Fifth, "The Incomparable Four."

THAT'S ONE REASON WHY this great car is so popular with women drivers—its simplicity and certainty of control.

"HANDLES JUST LIKE my old electric," exclaimed a prominent society woman when, after much hesitation, she essayed to drive her husband's new Reo the Fifth—and found to her surprise and delight that it was just as easy to drive a Reo gasoline car as it had been to drive her pokey old electric.

YOU SEE, THE TWO foot pedals are both "brakes"—and the left pedal also releases the clutch. Push half way—clutch releases and car coasts freely; push further and you set the "service" brake. Right foot sets the other or "emergency" brake.

NOW HERE'S THE DIFFERENCE between this Reo control and others:

ON OTHER CARS you must think of several things at once. Of course after a few weeks driving the various operations become practically automatic. But meantime—you may pay the price of the car for an accident, and a new radiator or fender is the frequent result of learning on most cars.

"STANDARD PRACTICE" controls one brake by a hand lever; the other by the right foot; and the clutch pedal is controlled by the left foot.

TO STOP QUICKLY and hold the car on an incline, you must perform three operations at least—release clutch and set two sets of brakes—one with the foot, one with the hand.

DRIVING REO THE FIFTH is simplicity itself to the novice—for all you need to know is "if in doubt, push both feet." Car stops—and nothing happens, you know, when you are standing still.

THE VERY FACT that you don't have to think which foot; nor need to use your hand at all; but can keep both hands firmly grasping the wheel, where they ought to be—till the emergency has passed—makes this the safest, simplest car in the world to drive—bar none.

JUST TRY IT YOURSELF—if you have ever driven any car you need absolutely no instructions. Glance at the index plate that surrounds the "one red" control lever—and you are an expert Reo driver from the instant.

IS IT ANY WONDER the demand for this Reo the Fifth has always been greater than the possible supply?

SIMPLICITY OF CONTROL—and low cost of upkeep are the two chief reasons.

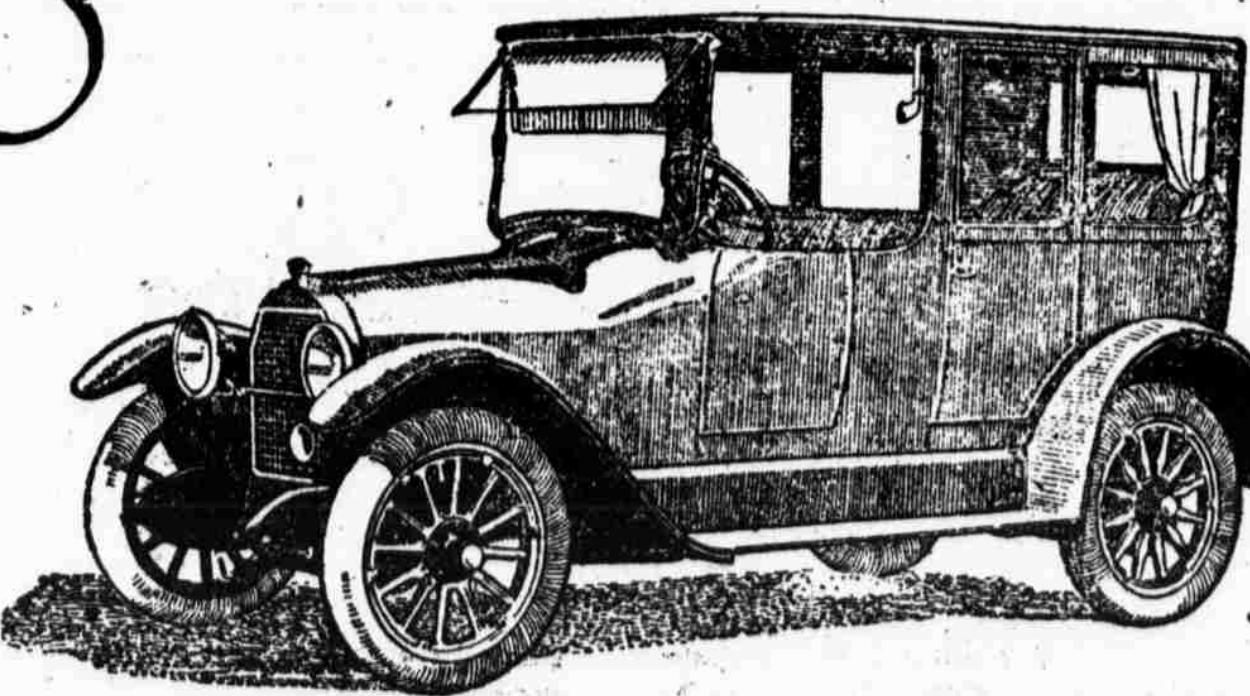
THE PRICE—\$875 f. o. b. factory, is the other reason—for the quality, the bigness, and the luxurious riding qualities of Reo the Fifth at this price, makes this car "The Gold Standard of Values" among automobiles.

Reo Motor Car Company
Lansing, Michigan

Trew Motor Co.,
1337 14th St.
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Phone North 510

"THE GOLD STANDARD OF VALUES"

STEARNS-KNIGHT



Makers of Knight Motors exclusively for the past six years you are secure in expecting and receiving from us the most satisfactory service obtainable in this remarkable engine, which, for all these years, has had the enthusiastic praise and continued patronage of satisfied owners.

The Automobile of Oct. 26, 1916, says: "A characteristic of Knight engines is high-power efficiency at low-revolution speed. The power curve of the 4-cylinder Stearns-Knight is the highest of all at 1,000 revolutions per minute" (or a traveling speed of about 23 miles per hour). This proves that the highest efficiency of any motor is delivered by the Stearns-Knight at average traveling speed.

And you have but to examine the various types of bodies to appreciate that our purpose has been to give you a little more than you expect, rather than a little less than you demand.—But to be assured of prompt delivery, we suggest making your selection now.

Closed Cars—4 & 8 Cylinder—\$2900 to \$3600

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